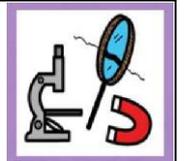


Home Learning – Website Ideas

Subject: Science



Top 10 Website Links

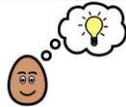


Link	Brief Description
https://babbledabbledo.com/20-science-projects-forpreschoolers/	This has a range of different science experiments and learning opportunities for families to do together at home. Most of the items needed are things that families will already have in their homes.
https://littlebinsforlittlehands.com/4-mini-easiest-kitchenscience-activity-trays/	These activities are all kitchen science sessions using foods.
https://www.bbc.co.uk/cbeebies/curations/science-activities	These videos are really well presented, very captivating and engaging with inspiration for parents of activities that they could do with their children.
http://www.sciencewithme.com/	This website covers lots of areas of the science curriculum, and includes free songs, clear imagery and e-books to fit with different science topics.
https://www.bbc.co.uk/bitesize/subjects/z6svr82	BBC clear animations covering a range of science topics.
https://pbskids.org/games/science/	A really good range of interactive games, where children can build different ecosystems and types of habitats, choose different materials for different tasks, find out about space and discover facts about different inventors and why their inventions were so important. There are lots more different activities and games on here too.
http://www.crickweb.co.uk/ks1science.html	The activities on here are a bit more challenging. They cover a good range of science topics too.
https://www.sciencekids.co.nz/	This website is a combination of games, facts, videos, lessons, quizzes, projects, images and even science jokes, all grouped under different topics. It's easy to navigate and accessible on tablets and PCs.

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https://wowscience.co.uk/	This website has some recognisable characters on it, from Cbeebies and CBBC. The website links through to lots of others when you navigate it. Some of the apps that it links too are only available on apple devices though.
https://www.bbc.co.uk/cbeebies/shows/do-you-know	This a Cbeebies show, based on science and engineering. The presenters find out how different things work and how they are made.



Suggested Activities

Activity

Magic Milk Science activity You need:

- Milk
 - Liquid food colouring – gel doesn't work well
 - Dish soap (washing up liquid) □ Cotton swabs
1. Pour a thin layer of milk in a shallow pan.
 2. Help the children to add drops of food colouring all around in the milk.
 3. The children can then pick up a cotton swab and dip it in the dish soap.
 4. Support the children to then put the cotton swab in the milk – pressing it down in one spot and holding it there for about 15 seconds. Watch what happens!



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Ideas

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Rainbow Water Experiment You need:

- 7 Small plastic cups or glasses (clear ones are the best, but any will do)
- Paper towels
- Food colouring (red, yellow, blue)
- Water



1. Place 7 cups in a row and pour water in the 1st, 3rd, 5th, and 7th cup. Fill them just over $\frac{3}{4}$ full.
2. Add 5 drops of red food colouring to the 1st cup and the 7th cup.
3. Add 5 drops of yellow food colouring to the 3rd cup.
4. Add 5 drops of blue food colouring to the 5th cup. Try to use the same amount of food colouring in each cup.
6. Take a sheet of paper towel and fold it in half lengthwise and in half again lengthwise.
7. Trim off some of the length so that there isn't too much excess paper towel that will stick up in the air between each cup. This will make the water travel more quickly between the cups.
8. Place one half of a rolled paper towel in the 1st cup and place the other half in the cup next to it. Then another paper towel from 2nd cup and into the 3rd cup. This continues until you have placed the last paper towel that drapes over from the 6th cup to the 7th cup.
9. Stare at the cups and watch what starts happening. You should quickly be able to see the coloured water begin to crawl up the paper towel.

Dancing Rice Experiment You need:

- A Clear container (cup or glass)
- Water
- Baking soda
- Vinegar
- Rice (just ordinary short grain rice works well)
- Spoon
- Optional: Food colouring



1. Pour one cup of water into your clear container.
2. Sprinkle some rice into the mixture. What happens to the rice? Why do you think this happens? The rice sinks to the bottom because it is denser than the water. (If your rice doesn't sink, it might be less dense than the water. Try a different kind of rice, broken pieces of vermicelli, or raisins.)
3. Add 1 tablespoon of vinegar to the water. What happens? Why? The vinegar reacts with the baking soda in the water creating bubbles of carbon dioxide.
4. Observe what happens over the next few minutes. Eventually the rice will begin to "dance". As bubbles of carbon dioxide adhere to the rice, the rice is brought up to the surface. Once it reaches the surface, the gas is released, and the rice falls back down again.

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Ideas

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Car Ramps and Friction You need:

- Materials to make ramps; you can use cardboard or wood planks. Have a look what you have lying around in your garage or shed.
 - Variety of toy cars
 - Variety of textured materials to create friction – There are so many ideas! You could use paper towels, sandpaper, rubber mats, tin foil, old carpet or even mud and dirt.
 - Tape to secure materials if necessary so they do not slip off the ramp.
1. Set up your ‘ramp’ somewhere in your house or garden. Maybe use the bottle couple of stairs or some steps outside.
 2. Attach your first material to the ramp.
 3. Explore the different materials on the ramp with your child. Does the height and angle of the ramp make the car go faster or slower? Which materials are rougher and mean that there is more friction between the surface of the ramp and the car tyres?



What melts in the sun?

You need:

- Lego block or duplo
- Ice cube
- wooden block
- A rock or stone
- A knob of butter
- A cube of cheese
- A marble



- A coin
- A piece of chocolate
- A wax crayon with paper removed □ A piece of a soap bar

1. Put the samples into the different sections of a muffin tray.
2. Talk about what might happen when you put the tray outside in the sun. If these objects get hot, what might happen to them? Which ones will melt? What will this look like? Which ones will stay the same?
3. Put the tray out in the sun. Observe what happens. You could use a timer too if you want to.

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Rainbow magic You need:

- Baking Soda
- Liquid Watercolours or Food colouring
- Glitter
- Washing up liquid
- Vinegar
- Glass jar
- Small plastic containers
- Tray



1. Fill the jar halfway with vinegar, then add a few drops of one colour of liquid watercolour/food colouring and some glitter.
2. Squeeze in some washing up liquid, stir, and place the jar on a tray.
3. Help your child to add in a heaped teaspoon of baking soda and then stir it again. Watch the foaming begin!
4. Keep the reaction going by adding baking soda and vinegar when the foam starts to slow.
5. To make it change colour, add a tablespoon of vinegar mixed with a little food colouring every so often. Make sure that the vinegar is poured into the centre of the jar.

Sense of smell You need:

- Plastic cups
- Tin foil
- Selection of smelly foods and safe liquids e.g. coffee granules, vinegar, chocolate, ginger powder, banana, tomato sauce, lemon.



1. Put a little bit of each food/liquid into individual cups.
2. Cover the cups with tin foil
3. Make a little hole in the top of the tin foil.
4. Play with your child to smell each one. Can they guess what is inside, without looking? Match the smell to each of the food items on the table. Which smells do they like? Which smells don't they like at all?

Float or sink

You need:

- A bucket or bowl of water

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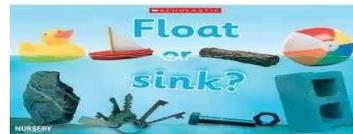
Ideas

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- Selection of objects from around the house 1.

Fill the bucket or bowl with water.

2. Work with your child to investigate through play which objects float and which sink. Is this what you thought would happen? Why did it float/sink?



Musical instruments. Making a shaker, you need:

- Plastic containers with lids - bottles or tubs
- Small empty cardboard boxes
- Choices of things to put inside – it's a good idea to use edible objects as many of our children like to put things in their mouths.

1. Help your child to choose a container and what to put inside. You could use dry cereal hoops, dry pasta, dry rice, raisins, dry beans or anything else that you fancy.

2. Work with your child to put the items in the box and put the lid on. Taping it closed will hopefully limit the mess later too.

3. Decorate the container either by colouring it in or sticking bits of coloured paper and card to it. Your child may want to help with cutting out decorations too.



To make a guitar or stringed instrument, you need:

- A cardboard box with a hole in (a tissue box is great or a cereal box with a hole cut in it).
- A long cardboard tube (from wrapping paper)
- Some elastic bands
- Some paper or colouring pens/paints to decorate the instrument with.
- cello tape

1. Prepare your box. Add the tube through the middle if you're making the guitar. You can add some lollipop sticks or cardboard to make the pretend tuning keys too 2. Stretch the elastic bands around it.

3. Enjoy your instrument.

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Ideas

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Melting ice with salt experiment You need:

- A block of ice (you can fill a freezer bag with water and freeze it, or use a plastic container filled with water either)
- Some salt
- A paintbrush
- Food colouring (optional)



1. Get your ice block ready to experiment with by putting it in a baking tray or bowl.
2. Mix your salt with food colouring. This is just for the rainbow effect. You can use different colours of food colouring in different bowls of salt if you want to.
3. Start to apply the salt to the ice block and watch what happens over time.

Sense of touch book You need:

- Some card
 - Some scraps of fabric and different craft bits and pieces
 - PVA glue
1. Gather all the scraps of material together and explore them together.
 2. Make your book by folding the pages together or hole punching each page and putting them in a folder or similar. You could hole punch each page or fold them to make a book.
 3. Help your child to stick the different items onto the different pages.
 3. You could hole punch each page or fold them to make a book.



OPTIONAL

Draw some simple pictures on the card – big and simple ones are best.

Help your child to select the best materials to stick on each picture.

You could write words about colour, texture and what the materials are used for on each page.